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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,496	09/16/2005	Anders Hyltander	10400-000151/US	8521
30593 7590 10/17/2008 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER				
CARLOS, ALVIN LEABRES				
ART UNIT		PAPER NUMBER		
3715				
MAIL DATE		DELIVERY MODE		
10/17/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/529,496

**Applicant(s)**

HYLTANDER ET AL.

**Examiner**

ALVIN L. CARLOS

**Art Unit**

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 and 3-22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 29 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 9/29/2008  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 30, 2008 has been entered.
2. The following is a Non-Final Office action in response to communications received July 30, 2008. Claims 1, 3, 7 and 13-14 have been amended and claim 2 has been cancelled. Claims 1, 3-22 are now pending.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1, 5, 7-8, 11-12, 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobus 5769640 in view of Rice 6310619.

Re claim 1, Jacobus discloses a method for generating a virtual anatomic environment for use in a computer based visual simulation of minimally invasive surgery (column 2 lines 22-29), comprising providing a main virtual anatomic environment

(column 4 lines 10-19), and selecting a local anatomic environment from a predefined library comprising a set of two or more local anatomic environments (column 3 lines 57-67).

However, Jacobus does not positively disclose the following limitations as taught by Rice: all of the local anatomic environments of the library being separately modeled, the local anatomic environments modeled to represent anatomic variations occurring in living beings (column 4 lines 63-67 and column 5 lines 1-29), and including the selected local anatomic environment in said main virtual anatomic environment to form said virtual anatomic environment, the selection of different combinations of selected local anatomic environments in said main virtual anatomic environment thereby allowing generation of different virtual environments, each different virtual environment representing anatomic variations occurring in living beings (column 2 lines 65-67 and column 3 lines 1-36).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus's invention in view of Rice in order to provide a computer-implemented virtual reality, tissue-specific body model that increases the efficiency and accuracy of anatomical study in an environment having user-variable physical and environmental properties as taught by Rice (column 3 lines 37-40).

Re claim 5, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches the main virtual anatomic environment is arranged to model an internal cavity of a human and the set of local anatomic environments is arranged to

simulate different arrangements of arteries, veins and ducts around an organ arranged in internal cavity (column 5 lines 1-29 and column 12 lines 6-14).

Re claim 7, Jacobus discloses a device for generating a virtual anatomic environment for use in a computer based visual simulation of minimally invasive surgery (column 2 lines 22-29).

However, Jacobus does not positively disclose the following limitations as taught by Rice: a modeling device for providing a main virtual anatomic environment (column 5 lines 30-45), a library, comprising a set of two or more local anatomic environments, all of the local anatomic environments of the library being separately modeled, the local anatomic environments modeled to represent anatomic variations occurring in living being (column 5 lines 1-29), and means for incorporating one of the local anatomic environments of the library into the main virtual anatomic environment, together forming said virtual anatomic environment, thereby allowing generation of different virtual environments, each different virtual environment representing anatomic variations occurring in living beings (column 5 lines 46-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus's invention in view of Rice in order to provide a computer-implemented virtual reality, tissue-specific body model that increases the efficiency and accuracy of anatomical study in an environment having user-variable physical and environmental properties as taught by Rice (column 3 lines 37-40).

Re claim 8, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches a selection device for selecting one of local anatomic

environments from library to be included in virtual anatomic environment (column 6 lines 62-67 and column 7 lines 1-7).

Re claim 11, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches the main virtual anatomic environment is arranged to model an internal cavity of a human (column 12 lines 6-14), the set of local anatomic environments is arranged to simulate different arrangements of arteries, veins and ducts around an organ arranged in internal cavity (column 5 lines 1-12).

Re claim 12, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches a device for generating a virtual anatomic environment (column 5 lines 30-45).

Re claims 14 and 15, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Jacobus discloses selecting a certain local anatomic environments from the library and including it into main virtual anatomic environment by user selection (column 3 lines 57-67).

Re claim 16, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches the main virtual anatomic environment is arranged to model an internal cavity of a human (column 12 lines 6-14), the set of local anatomic environments is arranged to simulate different arrangements of arteries, veins and ducts around an organ arranged in internal cavity (column 5 lines 1-12).

Re claims 17 and 18, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches the main virtual anatomic environment is arranged to model an internal cavity of a human (column 12 lines 6-14), the set of local anatomic

environments is arranged to simulate different arrangements of arteries, veins and ducts around an organ arranged in internal cavity (column 5 lines 1-12).

Re claims 19 and 20, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Rice teaches a device for generating a virtual anatomic environment (column 5 lines 30-45).

Re claims 21 and 22, Jacobus i.v. Rice discloses the invention as discussed above. In addition, Jacobus discloses components included in the local anatomic environment are excluded in the main virtual anatomic environment (column 4 lines 1-38).

5. Claims 3-4, 6, 9-10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobus 5769640 in view of Rice 6310619 and further in view of Ramshaw 5791907 .

Re claim 3, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: randomly selecting one of the local anatomic environments in the library (column 17 lines 9-12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

Re claim 4, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: the probability of randomly selecting a certain local anatomic environment essentially corresponds with the degree of occurrence of that local anatomic environment in living beings (column 17 lines 25-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

Re claim 6, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: selecting a certain local anatomic environments from the library and including it into main virtual anatomic environment by user selection (column 17 lines 25-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

Re claim 9, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: randomly select one of local anatomic environments from the library to be included in virtual anatomic environment (column 17 lines 9-12).



It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

Re claim 10, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: randomly select one of local anatomic environments in a way that the probability of selecting a certain local anatomic environment essentially corresponds with the degree of occurrence of that local anatomic environment in human beings (column 17 lines 25-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

Re claim 13, Jacobus i.v. Rice discloses the invention as discussed above.

However, Jacobus i.v. Rice fails to teach the following claimed limitations as taught by Ramshaw: randomly selecting one of the local anatomic environments in the library (column 17 lines 9-12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jacobus i.v. Rice invention and further i.v., Ramshaw in order to provide a cost-effective and quality medical training including an interactive user environment for surgical procedure as taught by Ramshaw (column 2 lines 50-52).

***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 3-22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as per the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN L. CARLOS whose telephone number is (571)270-3077. The examiner can normally be reached on 7:30am-5:00pm EST Mon-Fri (alternate Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571)272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Alvin L Carlos/  
Examiner, Art Unit 3715  
October 8, 2008

/Cameron Saadat/  
Primary Examiner, Art Unit 3715